

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
2 March 2006 (02.03.2006)

PCT

(10) International Publication Number  
**WO 2006/021833 A2**

(51) International Patent Classification: Not classified

(21) International Application Number:  
PCT/IB2004/004468

(22) International Filing Date:  
24 November 2004 (24.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/525,089 25 November 2003 (25.11.2003) US

(71) Applicant (for all designated States except US): UNIVERSITY OF CINCINNATI [US/US]; 2600 Clifton Avenue, Box 670829, Cincinnati, OH 45367-0829 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): WALZER, Peter, D. [US/US]; 6778 Little River Lane, Loveland, OH 45140 (US). CUSHION, Melanie, T. [US/US]; 6757 Little River Lane, Miami Township, OH 45140 (US). MAYENCE, Annie [BE/BE]; 53 Blvd. Albert-Elisabeth, B-7000 Mons (BE). HUANG, Tien, Liang [US/US]; 573 Aris Avenue, Merairie, LA 70005 (US). VANDEN EYNDE, Jean, Jacques [BE/BE]; 53 Blvd. Albert-Elisabeth, B-7000 Mons (BE).

(74) Agent: ALBAINY-JENEL, Stephen, R.; Frost Brown Todd LLC, 2200 PNC Center, 201 East Fifth Street, Cincinnati, OH 45202 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

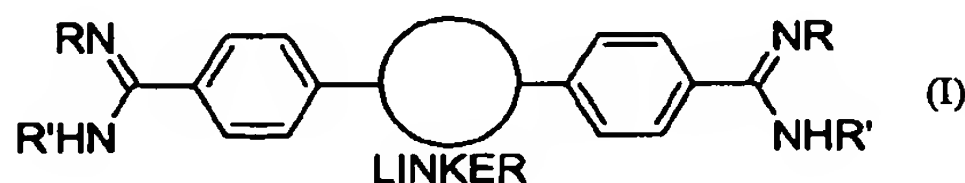
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: BISBENZAMIDINES FOR THE TREATMENT OF PNEUMONIA



1,4- disubstituted; R is selected from the group consisting of a hydrogen, a linear or branched alkyl group, containing from 1 to 20 carbon atoms; R' is selected from the group consisting of a hydrogen, a linear or branched alkyl group containing from one to twenty carbon atoms, an aromatic ring, a cycloalkyl group containing three to eight carbon atoms, or a hydroxyl group; alternatively, R and R' may form a cyclic structure that can be fused to another cyclic system; or a pharmaceutically acceptable salt thereof. Pharmaceutical formulations and active compounds useful in the practice of the present invention are also disclosed.

(57) Abstract: A method of combating infectious agents, such as *Pneumocystis pneumonia*, and a method of treating a subject in need of such treatment is disclosed. The method comprises administering to the subject a bis-benzamidine of formula (I) wherein the linker is a di-substituted cyclic moiety of any ring size and may contain at least one heteroatom; the aromatic group is 1,2-; 1,3-; or